

Application No. 10/812,190
Amendment dated April 29, 2008
Reply to Office Action of January 29, 2008

REMARKS

Status Of Application

Claims 1-4 and 6-11 are pending in the application and claim 5 is being canceled without prejudice; the status of the claims is as follows:

Claims 1, 3, and 7-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,111,338 to Nakayama (“Nakayama”).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakayama.

Claim 6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakayama in view of U.S. Application Publication No. US 2003/0189768 to Murayama (“Murayama”).

Claim 1-4 and 6-11 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

Claim 8 is objected to for insufficient antecedent basis.

Claim Amendments

Claims 1, 10, and 11 have been amended to incorporate the limitations of claim 5 and to more particularly point out and distinctly claim the invention of those claims. These changes do not introduce any new matter.

Claims 8, 9, 10, and 11 have been amended to provide for proper antecedent basis. These changes are not necessitated by the prior art, are unrelated to the patentability of the invention over the prior art, and do not introduce any new matter.

35 U.S.C. § 102(b) Rejection

The rejection of claims 1, 3, and 7-11 under 35 U.S.C. § 102(b) as being anticipated by Nakayama, is respectfully traversed based on the following.

Claim 1 is directed to a zoom lens system for directing an optical image to an electric image sensor. Claim 10 is directed to an image capturing device. Claim 11 is directed to a digital camera. The examiner rejected claims 1, 10, and 11, asserting that they are anticipated by Nakayama. However, it is respectfully submitted that claims 1, 10, and 11 are not anticipated by Nakayama, because Nakayama does not disclose each and every limitation of those claims. In particular, it is respectfully submitted that Nakayama does not disclose “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.” Section 2131 of the M.P.E.P. provides that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly, or inherently described, in a single prior art reference.” Therefore, claims 1, 10, and 11 are not anticipated by Nakayama if this limitation is not expressly or inherently described in Nakayama.

It is respectfully submitted that the zoom lens of Nakayama does not disclose the claims 1, 10, and 11 limitation “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.” As the examiner admits in his discussion of claim 5, Nakayama does not disclose this limitation. Particularly, Nakayama column 6 lines 3-5 provides that for the first embodiment, “[f]ocusing is carried out preferably by the first lens unit. Further, the fourth lens unit may be used for this purpose.” Figures 2, 3, and 4 disclose that the first lens unit is on the object side of a diaphragm, not the image side as required by the above limitation, and the fourth lens unit is the most image side lens unit, which is forbidden by the above limitation. As a result, the first embodiment of Nakayama does not disclose this limitation. Additionally, the second embodiment of Nakayama does not disclose this limitation. Particularly, column 10 lines 50-

55 disclose that for the second embodiment, “[f]ocusing is preferably performed by using the first lens unit. Further, the fourth lens unit or the third lens unit may be used instead.” Figures 9, 10, and 11 disclose that the first lens unit is on the object side of a diaphragm, not the image side as required by the above limitation, the third lens unit does not consist of a single lens element, and the fourth lens unit is the most image side lens unit, which is forbidden by the above limitation. Additionally, applicant is unaware of any other portion of Nakayama that discloses this limitation. Therefore, it is respectfully submitted that claims 1, 10, and 11 are not anticipated by Nakayama because they incorporate a limitation that is not disclosed in Nakayama.

Additionally, Claims 1, 10, and 11 are not obvious over Nakayama in view of Murayama because Nakayama in view of Murayama does not disclose or suggest “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element included in the most image side lens unit.” Although the rejection of claim 5 is moot because claim 5 has been canceled, the examiner’s rejection of claim 5 will be addressed because the claim 5 limitations have been incorporated into claims 1, 10, and 11. The examiner rejected claim 5, asserting that Nakayama in view of Murayama disclose “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm and not included in the most image side lens unit.” However, it is respectfully submitted that Nakayama in view of Murayama does not disclose or suggest this limitation.

First, Nakayama does not disclose or suggest “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.” Applicant is unable to find, and the examiner provides no argument, that Nakayama suggests this limitation. As a result, it is respectfully submitted that Nakayama fails to disclose or suggest this limitation.

Second, Murayama does not disclose or suggest “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.” The examiner asserted that “Murayama teaches this limitation (See at least numeral 30 and figs 3, 7, 11 and paragraph 0047).” However, it is respectfully submitted that neither the cited portions, nor any other portion, of Murayama disclose or suggest this limitation.

It is respectfully submitted that Murayama fails to disclose “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.” Paragraph 47 discloses that “the positive second lens group 20 and the positive third lens group 30 are each individually moved toward the object so as to vary the focal length of the entire endoscope objective optical system.” First, it is respectfully submitted that varying the focal length of an entire objective optical system does not perform focusing, but performs zooming. Paragraphs 47 and 48 make clear that Murayama discloses moving the second and third lens groups to change the focal power of the Murayama optical system. It does not disclose focusing, as is claimed in claims 1, 10, and 11. As a result, it is respectfully submitted that paragraph 47 does not disclose this claim 1, 10, and 11 limitation.

Second, it is respectfully submitted that even if the positive second lens group 20 and the positive third lens group 30 perform focusing, the focusing is not “performed by moving on the optical axis a positive single lens element.” As is shown in Murayama figure 17, both lens group 20 and lens group 30 are simultaneously moved on the optical axis. Additionally, Murayama does not disclose elsewhere that one of lens group 20 or lens group 30 is moved while the other is held stationary. Paragraph 49 of the specification of the present application teaches shortcomings of using multiple lens groups to focus. Paragraph 49 provides that focusing using a single lens element reduces weight, the lens barrel structure and the load on the drive motor. As a result, the specification teaches away from focusing which requires multiple lens groups, as is allegedly done in Murayama. Therefore, even if Murayama is

incorrectly read as disclosing that lens group 20 and lens group 30 are used for focusing, Murayama does not disclose using a single lens element for focusing.

Furthermore, the remaining portions of Murayama do not disclose this limitation. The examiner does not argue, and applicant is unaware of any other support that lens group 30 in figs 3, 7, and 11 discloses this limitation. In fact, applicant is unaware of any other portion of Murayama that discloses this limitation. As a result, it is respectfully submitted that Murayama fails to disclose “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.”

In addition, it is respectfully submitted that Murayama fails to suggest “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.” The examiner provides no argument, and applicant is unaware of any argument, that Murayama suggests this limitation. Therefore, it is respectfully submitted that Murayama fail to disclose or suggest this limitation.

Finally, it is respectfully submitted that Nakayama in view of Murayama does not disclose or suggest “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.” As discussed above, neither Nakayama nor Murayama disclose or suggest this limitation. Therefore, Nakayama in view of Murayama does not disclose this limitation. Additionally, the examiner provides no argument, and applicant is unaware of any argument, that Nakayama in view of Murayama suggests this limitation. As a result, it is respectfully submitted that Nakayama in view of Murayama fails to disclose or suggest the limitation providing that “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit.”

Application No. 10/812,190
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Therefore, because Nakayama in view of Murayama does not disclose or suggest the limitation that “wherein the focusing is performed by moving on the optical axis a positive single lens element disposed in a position on the image side of a diaphragm, the positive single lens element not included in the most image side lens unit” and claims 1, 10 and 11 all incorporate this limitation, it is respectfully submitted that claims 1, 10, and 11 are non-obvious over Nakayama in view of Murayama.

Claims 3 and 7-9 are dependent claims of claim 1, and therefore are also not anticipated by Nakayama. As discussed above, Nakayama does not disclose all claim 1 limitations. Because claims 3 and 7-9 are dependent claims of claim 1, they incorporate all claim 1 limitations. As a result, Nakayama does not disclose all limitations of claims 3, and 7-9. Therefore, it is respectfully submitted that for at least this reason, claims 3 and 7-9 are not anticipated by Nakayama.

Accordingly, it is respectfully requested that the rejection of claims 1, 3, and 7-11 under 35 U.S.C. § 102(b) as being anticipated by Nakayama, be reconsidered and withdrawn.

35 U.S.C. § 103(a) Rejections

Claims 4 and 6 are non-obvious because they depend from a non-obvious claim. Section 2143.03 of the M.P.E.P. provides that “[i]f an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious.” As discussed above, claim 1 is non-obvious. Claims 4 and 6 depend from claim 1. As a result, it is respectfully submitted that claims 4 and 6 are allowable as nonobvious.

Accordingly, it is respectfully requested that the rejection of claims 4 and 6 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

35 U.S.C. § 112 Rejection

The rejection of claims 1-4 and 6-11 under the first paragraph of 35 U.S.C. § 112 as containing subject matter which was not described in the specification in such a way as to

enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, is respectfully traversed based on the following.

First, the examiner rejected independent claims 1, 10, and 11, as well as dependent claims 2-9, asserting that “there is insufficient support for the claim limitation ‘a following lens unit having at least a third lens unit and a fourth lens unit and having at least a positive lens element and a negative lens element in a lens unit.’” However, it is respectfully submitted that the specification provides support for claims 1-4 and 6-11.

Claims 1, 10, and 11 disclose a “following lens unit including at least a third lens unit and a fourth lens unit, wherein at least one lens unit included in the following lens unit has at least a positive lens element and a negative lens element.” The examiner asserted that “the specification . . . do not disclose third and fourth lens units each having a positive and negative lens element.” However, the clear language of the claim limitation merely requires that at least one lens unit included in the following lens unit has at least a positive lens element and a negative lens element, not that both the third lens unit and the fourth lens unit have at least a positive lens element and a negative lens element. As a result, the specification need only provide support for at least one lens unit in the following lens unit that has at least a positive lens element and a negative lens element.

The specification provides support for “a following lens unit including at least a third lens unit and a fourth lens unit, wherein at least one lens unit included in the following lens unit has at least a positive lens element and a negative lens element.” First, paragraph 17 discloses “a third lens unit including a most image side lens unit having at least a positive lens element and a negative lens element.” Likewise, paragraph 37 of the specification discloses that “the most image side lens unit includes a positive lens element and a negative lens element.” As a result, the specification provides support for “a following lens unit including at least a third lens unit and a fourth lens unit, wherein at least one lens unit included in the following lens unit has at least a positive lens element and a negative lens element.”

Application No. 10/812,190
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Second, the examiner rejected claim 2, asserting that “[t]he specification in regard to newly amended claim 2, does not disclose a most image side lens unit having a positive optical power in a 4 unit lens system (fig 1, Emb 1).” However, it is respectfully submitted that figure 1, embodiment 1 discloses a 4 unit lens system, and paragraph 45 of the specification discloses that the most image side lens unit has a positive optical power. As a result, it is respectfully submitted that claim 2 finds support in the figures and specification.

Accordingly, it is respectfully requested that the rejection of claims 1-4 and 6-11 under the first paragraph of 35 U.S.C. § 112 as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention, be reconsidered and withdrawn.

Claim Objections

The examiner objected to claim 8, asserting there is insufficient antecedent basis for “the single negative lens element.” Claim 8 has been amended to provide for proper antecedent basis. As a result, the examiner is respectfully requested to withdraw the objection.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a fee, other than the issue fee, is due, please charge this fee to Sidley Austin LLP Deposit Account No. 18-1260.

Application No. 10/812,190
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If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin LLP Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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